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Partners in health? A systematic review of the impact of organisational partnerships on public health outcomes in England between 1997 and 2008

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ABSTRACT

Objective: To systematically review the available evidence on the impact of organisational partnerships on public health outcomes (health improvement and/or a reduction in health inequalities) in England between 1997 and 2008

Design: Systematic review of quantitative (longitudinal before and after) and qualitative studies (1997-2008) reporting on the health (and health inequalities) effects of public health partnerships in England.

Data sources: 18 electronic databases (medical, social science and economic), websites, bibliographies, and expert contacts.

Results: Only 15 studies, relating to six different interventions, met the review criteria and most of these studies were not designed specifically to assess the impact of partnership working on public health outcomes. Of the studies reviewed, only four included a quantitative element and they produced a mixed picture in terms of the impacts of partnership working. Qualitative studies suggested that some partnerships increased the profile of health inequalities on local policy agendas. Both the design of partnership interventions and of the studies evaluating them meant it was difficult to assess the extent to which identifiable successes and failures were attributable to partnership working.

Conclusion: This systematic review suggests that there is not yet any clear evidence of the effects of public health partnerships on health outcomes. More appropriately designed and timed studies are required to establish whether, and how, partnerships are effective.

Abstract: 200 words

Keywords

1. Systematic review
2. Public health outcomes
3. Partnership working
4. Health policy

BACKGROUND

Research about the importance of partnership working in health and the processes this involves is prominent in the public health management literature.^{1,2} However, it is not clear to what extent (if at all) partnership working contributes to achieving better population health outcomes.² In order to establish the extent of the evidence-base that does explore this issue, and to highlight gaps within it, a systematic review was conducted.

Public Health Partnerships

In recent years, there has been an implicit assumption amongst English policymakers that partnerships are *a priori* 'a good thing' which will aid attempts by various local organisations to improve public health.^{3,4} From Labour's first (post-1997) White Paper on public health⁵ through to the most recent Status Report on tackling health inequalities,⁶ the notion that partnership working is essential to achieving desirable public health outcomes in the UK is never contested. This is evident in the plethora of public health partnerships established during the last decade, including Health Action Zones (HAZs); Healthy Living Centres (HLCs); Neighbourhood Renewal Partnerships; Health Improvement Programmes (HImPs); and Local Strategic Partnerships (LSPs).

Yet, partnerships incur significant costs⁷ and their contribution to improving health outcomes is far from clear.^{2,8} In part, this is because the prominent research literature on partnerships often focuses on process-related issues, rather than outcomes.² Additionally, whilst a great deal has been written about partnerships between health and social care organisations,^{9,10,11,12} far less is known about partnerships for public health. This seems surprising, given that public health problems often involve precisely the kind of complex interplay of factors that single organisations may find difficult to tackle in isolation. The *Foresight* report on the complex policy challenges posed by obesity is a good example of the rationale underpinning the presumed need to work in partnership to tackle public health concerns.¹³

Although it is recognised that definitions of successful partnership working are multiple and varied, it was not the aim of the study presented here to explore these differences, nor was it part of our objectives to measure the extent to which partnerships had (or had not been) successfully forged.

Issues around the conceptualisation of partnership working in public health are taken up in a related paper. (see Perkins et al, under review)

Evidence Synthesis

Systematic review methodology enables researchers to establish the full extent and quality of research evidence on a given question, to highlight gaps in the evidence-base and thus inform the direction of future research. Indeed, in pointing to the need for better evidence on the effects of public health interventions, the second Wanless Report emphasised the importance of systematic reviews.¹⁴ Given the status of partnership working, our systematic review of the health impacts of public health partnerships (funded by the NIHR NHS Service and Delivery Organisation Programme) should be beneficial and timely to policymakers and researchers.

METHODS

The review set out to identify both quantitative (longitudinal before and after designs) and qualitative empirical studies (including 'views' studies¹⁵) that examined the impact of organisational partnerships on public health outcomes (health improvement and/or a reduction in health inequalities) in England. The review focuses solely on England for two reasons. First, it is part of a larger study of partnerships involving Local Area Agreements, which do not exist elsewhere in the UK. Second, and more importantly, the significant variations in the organisation and structure of the public sector in the four constituent UK countries suggest the experiences of partnership working are unlikely to be comparable. Full inclusion and exclusion criteria are presented in Box 1. Eighteen electronic databases were searched from January 1997 to June 2008. These covered academic research, local and central government studies and grey literature. Full details of the electronic databases and websites, and the keywords, and terms used to drive searches are available in Web Appendix 1. In addition, the bibliographies of all included studies were hand searched and information on unpublished or in-progress research was requested via author contact.

In total 1058 abstracts/titles were located, of which 895 were excluded at the titles and abstract stage. 163 papers were retrieved for full paper analysis with full data extraction conducted on 31 studies. Data were extracted and studies were critically appraised (KS/NP) and independently checked

(KJ/CB). Any disagreements were resolved by joint re-examination. Critical appraisal criteria for qualitative papers were adapted from Rees *et al.*¹⁶ and Public Health Resource Unit¹⁷, whilst quantitative studies were appraised using criteria applied in previous systematic reviews of complex public health interventions and existing guidance for the evaluation of non-randomised studies (Box 2).^{18,19,20,21} The critical appraisal criteria were applied with respect to the general design of studies, once it had been decided to include them (as opposed to being applied to the ability of studies to address the systematic review question), and the results were used for descriptive purposes only, to highlight variations in the quality of studies. No quality score was calculated.

Of the 31 papers where data were extracted, 16 were excluded for one or both of the following reasons: (i) the study did not fulfil any quality appraisal criteria (n=5); or (ii) the study did not examine outcomes relating to health or health inequalities (n=10). In relation to the quantitative evidence base, studies which were not 'before and after' designs were also excluded (n=1).

Synthesis

Narrative synthesis was performed to combine the qualitative and quantitative evidence. Results are tabulated (Tables 1-3) as well as summarised in the following text.

RESULTS

Only 15 studies met the review criteria and specifically assessing the impact of partnership working on public health outcomes was not the main focus of most of these (see 'Limitations of this Study'). This supports previous claims that there is a dearth of research adequately exploring the impacts of partnership working and that persistent policy support for the concept is largely faith-based.^{2,27} The studies covered the following six interventions (described in Box 3): Health Action Zones (HAZs) (eight studies), Health Improvement Programmes (HImPs) (two studies), New Deal for Communities (two studies), Health Education Authority Integrated Purchasing Programme (HIPP) (one study), Healthy Living Centres (HLCs) (one study), and National Healthy School Standard (NHSS) (one study). Seven studies reported on direct health outcomes, whilst the others related to indirect outcomes (such as the profile of health inequalities, or the commissioning of new health improvement interventions). Two studies were largely quantitative, two used mixed methods, and the remainder

were largely qualitative (documentary analysis, semi-structured interviews and focus groups). Summary details of the reviewed studies are available in Tables 1-3.

Health Action Zones (HAZs)

One quantitative and seven qualitative studies examined the impact of Health Action Zones (HAZs) on outcomes relating to public health and health inequalities. Five of these studies formed part of the complex, multi-faceted official national evaluation of HAZs, whilst the other three examined local HAZs or specific HAZ facilitated interventions (Table 1).

The results which emerged from the national evaluation were somewhat inconclusive with regards to the efficacy of partnership working (a finding which should be viewed in the context of the fact that partnership working was not the main focus of most of these studies and, in many cases, was reported as a successful outcome in and of itself).^{7,23,24-26,28-32} The quantitative study (a retrospective longitudinal study of HAZ and non-HAZ areas matched by deprivation level)³³ compared local authority level health data for one year prior to the HAZs (1997/98) with data for two years post (2001/02). This analysis produced some evidence to suggest that HAZs outperformed similarly deprived non-HAZ areas in relation to all cause mortality and coronary heart disease (CHD) mortality. For example, for the 15-64 age group, CHD mortality decreased by 22% compared to 18.3% in comparison areas. However, the findings were not consistent across all health indicators as mortality from accidental falls, for example, increased in by 31.34% in first wave HAZs even though some of these areas had prioritised accident prevention programmes. Overall, the authors of the study conclude that the data “do not support the view that HAZs made greater improvements to population health than non-HAZ areas between 1997 and 2001”.³³ Given the number of factors involved in HAZs in addition to partnership working (not least access to extra resources), the variation between HAZs (in terms of their chosen public health foci, their approach to partnership working and the contexts within which they were implemented), their short-term nature and the ever-shifting political context, it would not be reasonable to conclude that HAZs provide a clear example of the failure of partnership working to contribute to improved public health outcomes. Furthermore, the accompanying qualitative study (interviews with HAZ managers and policy document analysis) reported that HAZs’ activities had at least made health inequalities more visible on local agendas.³⁴

Three other qualitative studies (comprising interviews with HAZ managers and stakeholders, in coordination with policy document analysis) of the national evaluation were included in this review.^{28,29,32} They were limited in the extent to which they were able to discuss the success (or otherwise) of HAZs as they all focused on the perceptions of individuals involved in implementing HAZ programmes, rather than the local populations whose health HAZs were intended to improve. In two of these studies^{28,32} respondents expressed the view that the impact of HAZs on health inequalities at the time the data were gathered had been minimal or unclear, although both also claimed participants believed HAZs had helped 'mainstream' health inequalities (i.e. bring it to the attention of a range of individuals and organisations)³² or move it up the local policy agenda.²⁸ All three of these studies were deemed of a low methodological quality (see section (a) in Table 1), largely because not enough information was provided to assess fully the quality (i.e. to answer all of the questions in Box 1) but also because the aims were either too vague or were not sufficiently addressed by the methodological approach (this was particularly the case for aims/questions relating to the effect of the HAZs on health inequalities or other health outcomes).

The three studies included in the review which focused specifically on an individual case study HAZ,³¹ or a specific type of project that had been facilitated by a HAZ^{35,36}, made much greater claims to a public health intervention effects (see section (b) in Table 1). However, the critical appraisal process suggested that the methodological quality of these studies was also generally low.

Health Improvement Programmes (HImPs)

Two qualitative studies considered the impact of Health Improvement Programme (HImP) partnerships (Table 2). The study by Powell et al.³⁷ reported that there was a lack of clarity amongst key stakeholders in three case study HImPs about what partnership working could contribute to public health outcomes. Similarly, in Benzeval and Meth's study,³⁸ managers reported they felt that, whilst HImP had moved health inequalities onto the agenda, there remained a need for a coherent strategic framework addressing inequalities to be built into local policy. The critical appraisal process suggested that these studies were of a good quality, but they did not offer much information on health outcomes.

New Deal for Communities (NDC)

Two high quality prospective studies evaluated New Deal for Communities (NDC) partnerships (Table 2).^{39,40} Neither study found an intervention effect. The large-scale, mixed methods study (comprising a large n longitudinal study of NDC areas and equivalently deprived non-NDC comparison areas, secondary data analysis, documentary analysis, and 78 focus groups with participants)³⁹ reported small improvements in lifestyle indicators (e.g. smoking fell by 2% to 38%) and morbidity rates (1.93 to 1.77, no p value) after three years. However, non-NDC areas experienced similar decreases. The focus group data suggested that residents believed that services had improved in the NDC areas. Similarly, the quantitative study (a longitudinal survey comparing NDC residents and non-NDC residents in comparator areas matched for deprivation)⁴⁰ found that, although there were small improvements in NDC areas (e.g. in relation to employment or smoking prevalence), these were mirrored in the comparison areas and so no consistent differences between intervention and comparison areas for any health related outcomes were identified. Residents with the lowest educational attainment and poorest health at baseline experienced the smallest improvements in outcomes. Again, these trends were also apparent in non-NDC areas, although the relationship between level of education and take-up of education/training opportunities was less pronounced in NDC areas, suggesting that inequalities were “growing less fast” in areas covered by this intervention type.⁴⁰ However, as with HAZs, the complexity of NDC interventions and the number of other factors involved (such as the extra resources made available to these areas) make it impossible to conclude to what extent partnership working contributed (or not) to the differences in health outcomes observed in these studies.

Other interventions

Three studies evaluated the following other types of partnership interventions: The Health Education Authority's Integrated Purchasing Programme (HIPP)⁴¹; Healthy Living Centres (HLCs)⁴²; and the National Healthy School Standard (NHSS)⁴³ (Table 3).

Health Education Authority's Integrated Purchasing Programme (HIPP)

Evans and Killoran conducted a series of semi-structured interviews with key stakeholders involved in HIPP.⁴¹ There was little discussion of direct public health outcomes but, in terms of indirect outcomes,

respondents reported that health inequalities moved up local policy agendas. Little information was given about the methodological approach.

Healthy Living Centres (HLCs)

In a large (n=1400) prospective, mixed methods study of HLCs, Hills *et al.* combined longitudinal survey data of users (comparing regular and non-regular HLC users) with focus groups of employees and managers.⁴² The quantitative and qualitative data both suggested that regular attendance at HLCs was felt to help individuals adopt a healthier lifestyle and to sustain these healthy lifestyle changes thereafter. For example, the survey of users found that regular users of HLCs did not experience the marked decline in self-reported physical and mental health after follow-up that non-regular users experienced (physical health OR 1.24, [95% CI 0.27-2.22] $p<0.05$; mental health OR 2.12, 95% CI [0.941-3.30] $p<0.001$) and that regular HLC attendance was associated with beneficial outcomes relating to smoking (OR 0.47 95% CI [0.28-0.78] $p<0.01$), physical activity (OR 1.34 [95% CI 1.03-1.74] $p<0.05$) and fruit/vegetable consumption (5 daily portions, OR 1.58 [95% CI 1.20-2.08] $p<0.001$). Non-significant differences in alcohol consumption were also reported. This was a fairly good quality study, but the low follow-up response rate (31%) should be noted. In the qualitative component, respondents viewed HLCs as successful in engaging some of the most deprived sections of their local community, and felt that HLCs had an important protective health effect. However, it was unclear precisely which aspects of HLCs contributed most to these positive assessments and, once again, it is therefore difficult to conclude much about the role that partnership working played.

National Healthy School Standard (NHSS)

An evaluation of the National Healthy School Standard, a partnership involving the Department of Health, the Department for Education and Skills and the Health Development Agency, employed mixed methods to assess the extent to which the NHSS was reducing health inequalities⁴³. However, only the qualitative component met the systematic review inclusion criteria (the quantitative element was cross-sectional, not longitudinal). Interview data suggested that, in terms of indirect outcomes, the NHSS partnership led to the introduction of specific health-related initiatives (such as drinking water, addressing mental health and emotional well-being issues and healthy eating); raised awareness among local professionals of links between health and educational attainment; led to the

development of named 'health governors' in schools; and helped develop and implement a validation and accreditation process for healthy schools.

DISCUSSION

Main findings of this study

Overall our review has found that there is little evidence of the direct health effects of public health partnerships. Where successes relating to public health outcomes were observed, it was extremely difficult to assess the extent to which these were directly attributable to partnership working for the following reasons. First, 'partnership working' was rarely adequately defined and many of the studies assumed that evidence of supportive attitudes to working in partnership were themselves a positive outcome and a proxy for success. Second, the studies largely involved multifaceted interventions which did not rely solely upon partnership working and which often overlapped with other, similar interventions, making it difficult to attribute outcomes directly to partnership working. Third, many of the studies reported that the public health aims of the interventions shifted during the lifetime of the intervention, with the consequence that initial methodological approaches were overtaken within the study period (a common problem with evaluating health policy⁴⁴). This was exacerbated by the short time-spans and relatively small-scale of most of the interventions.

In addition, our study has found that the quality of the majority of studies was limited (see Box 4). Most were relatively small-scale, qualitative evaluations, which focused on capturing the perceptions of managers and other actors involved in implementing the partnership-based interventions. To be able to determine whether or not an intervention is having an effect on the health of the target population, either a (large n, controlled) quantitative study design is required or a more sophisticated approach needs to be taken to the qualitative evaluation, with more attention given to gathering data from the individuals whose health the intervention is intended to improve. Only four studies included a longitudinal quantitative element (all with comparison areas/groups) and they produced a mixed picture in terms of the impacts of partnership working: the retrospective HAZ evaluation was inconclusive with both positive and negative effects³³, the two prospective NDC studies found no differences between intervention and comparison groups^{39,40}, whilst the prospective evaluation of

HLCs showed some positive effects on lifestyle factors⁴². Although some of the qualitative studies suggested that health inequalities moved up local policy agendas, they could not attribute causality, particularly as the health inequalities were simultaneously being given more prominence in national policy discourse. Further, there was very little evidence as to whether the health improvement interventions initiated by partnerships would have been implemented regardless of the partnerships or whether the interventions were able to continue after the partnerships ended.

What is already known on this topic

The majority of existing research on health partnerships focuses on health and social care, rather than public health.^{2,45-51} In 2004, Dowling *et al.*² drew on this body of research in an attempt to conceptualise 'successful' partnership working. Although this article was not based on a systematic review and did not focus on public health partnerships, it similarly concluded that very little was known about the outcomes of partnerships. This is despite the fact that a number of publications have attempted to draw out the key ingredients of 'successful' partnership working.⁵²⁻⁵⁴ This is because these publications are all more concerned with the processes and ingredients conducive to the success of partnership working (such as, for example, the need for high levels of trust between partners and clear, shared goals) than they are with exploring what their impact might be. It is possible that some of these lessons are relevant to public health partnerships, and that partnerships which adhere to these recommendations may be in a better position to contribute to public health outcomes than those which do not. However, given the complex interdependencies involved in many public health issues⁵⁵, this should not be assumed (assessing whether this is the case is the subject of another paper⁵⁶). Specifically in relation to public health partnerships, Peckham⁵⁷ has reviewed different types of partnerships but, whilst he concludes that 'partnership is a fundamental concept which underpins public health policy and action', he is unable to offer evidence as to their impact on health outcomes.

What this study adds

This paper presents the results from the first systematic review of the evidence relating to the health impacts of public health partnerships. It demonstrates that, to date, very little is known about the health impacts of public health partnerships as they have not yet been rigorously evaluated. Amongst the studies that at least touch on this issue, there is an obvious lack of high quality qualitative research, particularly in terms of studies which engage with the views of those whose health the interventions are intended to improve (Box 4). Equally, there is a paucity of quantitative studies which assess the effects, and cost effectiveness, of partnership interventions. The few quantitative studies located were of variable methodological quality (Box 4). This is perhaps not surprising given the complex nature of the interventions under review,⁵⁸⁻⁶⁰ and the constantly changing organisational and policy contexts,^{34,60,61} as well as the pressure to produce rapid evidence of the efficacy of interventions.²³ Indeed, the difficulties in applying well designed, experimental methodological approaches to complex, area-based policy interventions have been widely discussed.^{44,59,62}

Nevertheless, if the health effects of partnerships are to be properly understood, more innovative methodological approaches to studying their impact on health outcomes are required, preferably combining quantitative (prospective, controlled) assessments of health outcomes with qualitative analyses of target populations. As discussed elsewhere,^{34,60} studies of complex, area-based interventions frequently report having been constrained by short-term policy time frames and constantly changing demands from central government. Hence, if an adequate evidence-base to better judge the impact of partnership working on public health is desired, those involved in funding and implementing partnership-based projects need to work with researchers to facilitate better quality and longer-term evaluations.

Limitations of this study

Searching for studies on public health interventions is difficult and time-consuming and the search strategies can often suffer from a lack of specificity. This was particularly problematic in this review due to the popularity of the term partnership,²⁷ a lack of clarity about what is meant by this term, and the diverse nature of public health. This meant that it was not possible to employ broad search terms because the number of references returned became unmanageable. Hence, although we employed a

broad definition of public health partnerships in our inclusion criteria (Box 1), our search strategy (Web Appendix 1) may have missed relevant studies which looked at partnerships relating to public health issues but which did not specifically refer to public health, wellbeing, health improvement or health inequality. However, to ensure that the searches were as extensive as possible, our strategies were piloted and revised and were conducted by an experienced librarian (EB). In addition, the bibliographies of all included studies were hand-searched and information on unpublished or in-progress research was requested via author contact. Despite this, as for any review of complex and difficult-to-define interventions, it is not possible to be sure that all relevant reviews have been located.⁶³ Further, our review focused exclusively on partnerships in England from 1997-2008. Generalisation of the results to partnerships operating elsewhere should therefore only be undertaken with caution.

CONCLUSION

The current evidence-base on the effects of public health partnerships on health outcomes is partial and methodologically limited. The fact that evidence on the effectiveness of partnerships is lacking does not necessarily mean that they are ineffective but, without such evidence, it ought to be acknowledged that the benefits attributed to this way of working are largely presumed. Given the far from insignificant costs associated with partnerships (both in terms of financial resources and staff time) and their profusion in recent years, a comparative analysis of interventions and strategies with similar public health aims that have adopted partnership working as their *modus operandi* and/or *vivendi* is urgently required. A larger study, of which the systematic review reported here forms a key component, seeks to address this issue through an exploration of a sample of LSPs that have produced local area agreements (LAAs). The LSPs and LAAs will be studied from the perspectives of both those engaged in the partnerships and those who might be expected to benefit from their efforts.

ACKNOWLEDGEMENTS

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COMPETING INTERESTS

All authors declare that they have no competing interests.

ETHICAL APPROVAL

Ethical approval was not required for this literature review.

Box 1: Inclusion and Exclusion Criteria

Public health partnerships were defined as: organisational partnerships (of two or more organisational bodies) which aim to improve public health outcomes (through population health improvement and/or a reduction in health inequalities). To be included studies had to:

- Explicitly describe the public health partnership under evaluation or assess one of the key known public health partnerships (such as LSPs, HAZs, Neighbourhood Renewal Partnerships, or HImPs);
- Involve partnerships based in **England that were active between 1997 and 2008** (those partnerships which were terminated by (or during) 1997 were excluded);
- Contain data on the impact of organisational partnerships on public health outcomes (health improvement and/or a reduction in health inequalities) either directly (for example effects of partnerships, or partnership implemented interventions, on self-reported health) or indirectly (by, for example, raising the policy profile of health inequalities).

Partnerships designed to improve clinical health outcomes, the control of infectious diseases or outcomes relating to the treatment of illnesses were not included. Opinion or theoretical based papers that did not draw on empirical data were excluded, as were studies that only examined processes of working in partnership (as opposed to public health outcomes) and non-English language papers.

Box 2: Critical appraisal criteria

These criteria were used to appraise all of the included studies with respect to their general design. The results of this process are presented under the critical appraisal section of the results tables 1-3, with the numbers 1-10 representing satisfactory fulfilment of the corresponding criterion.

Qualitative studies^{16,17}

- 1) Is there a clear statement of the research question and aims?
- 2) Was the methodology appropriate for addressing the stated aims of the study?
- 3) Was the recruitment strategy appropriate and was an adequate sample obtained to support the claims being made?
- 4) Were the data collected in a way that addressed the research issue?
- 5) Are the methods of data analysis appropriate to the subject matter?
- 6) Is the description of the findings provided in enough detail and depth to allow interpretation of the meanings and context of what is being studied? [Are data presented to support interpretations, etc?]
- 7) Are the conclusions / theoretical developments justified by the results?
- 8) Have the limitations of the study and their impact on the findings been considered?
- 9) Is the study reflexive? [Do authors consider the relationship between research and participants adequately and are ethical issues considered?]
- 10) Do researchers discuss whether or how the findings can be transferred to other contexts or consider other ways in which the research may be used?

Quantitative studies¹⁸⁻²¹

- 1) Is the study prospective?
- 2) Is there a representative sample?
- 3) Is there an appropriate control group?
- 4) Is the baseline response greater than 60%?
- 5) Is the follow-up greater than 80% in a cohort study or greater than 60% in a cross-sectional study?
- 6) Have the authors adjusted for non-response and dropout?
- 7) Are the authors' conclusions substantiated by the data presented?
- 8) Is there adjustment for confounders?
- 9) Were the entire intervention group exposed to the intervention? Was there any contamination between the intervention and control groups?
- 10) Were appropriate statistical tests used?

Box 3: Descriptions of the main public health partnership interventions covered by the review

Although the public health partnerships are described separately below, it should be noted that many overlapped with one another both geographically and in terms of implementation timescales.⁶⁴

Health Action Zones (HAZs)³⁰⁻³²

HAZs were area based initiatives designed to tackle social exclusion and inequalities. Acknowledging the wider determinants of health, HAZs were intended to develop partnership working between the NHS, local government and other sectors with the aim of tackling ill health and persistent inequalities in the most disadvantaged communities across the UK. Initially 11 Health Action Zones were launched in the first wave in April 1998, followed by a further 15 HAZs in April 1999. Collectively HAZs were awarded £320 million over a three-year period. Originally, it was intended that the lifespan of HAZs would last between five and seven years, with successful services being mainstreamed thereafter. However, HAZs were effectively wound down by 2003. The projects facilitated by HAZs varied extensively but included initiatives which aimed to: address social and economic determinants (e.g. services providing advice on benefit support³⁵); promote healthy lifestyles (e.g. breakfast clubs²⁴); empower individuals and communities (e.g. Gypsy and Traveller Project Advisory Group²⁵); and improve health and social care services (e.g. Integrated Substance Misuse Service³¹).

Health Improvement Programmes (HImPs)⁶⁴

HImPs are action plans developed by NHS and local government bodies working together. They were introduced in 1999 and, despite being re-named Health Improvement and Modernisation Plans in 2001, they continue to form a key approach to public health in England. The plans set out how these organisations (with, where deemed appropriate, voluntary and private sector input) intend to improve the health of local populations and reduce health inequalities. The programmes offer a three year plan for identifying local health needs and developing relevant strategies to improve health and health care services at a local level. HImPs were founded on the basis of multi-agency partnership working between local government and Strategic Health Authorities

New Deal for Communities (NDC)^{39,40}

As part of the Neighbourhood Renewal Strategy, NDC was developed to tackle health and social inequalities experienced by the 39 most deprived communities in the UK. In partnership with local communities, NDC seeks to address embedded issues of deprivation and long term poverty by improving outcomes in terms of housing, education, employment and health. Interventions have mainly focussed on: promoting healthy lifestyles; enhancing service provision; developing the health workforce; and working with young people.

Health Education Authority's Integrated Purchasing Programme (HIPP)⁴¹

The Integrated Purchasing Programme was developed by the Health Education Authority and ran between 1996 and 1999. The overall aim of the programme was to provide support for partnerships between local authorities, primary care groups and health authorities in improving health. Five demonstration projects were launched, each involving a local partnership to tackle health inequalities. Other elements of the programme included a national Practice Exchange Network, a learning and dissemination programme and a knowledge resource base.

Healthy Living Centres (HLCs)⁴²

HLCs were introduced in 1998 to tackle the broader determinants of health inequalities and to improve health and wellbeing at a local level. Funding was awarded for 352 community projects which varied in terms of focus, ranging from service-related issues to activities addressing unemployment, poverty and social exclusion. Partnership working was presented as an underpinning concept of HLCs. Example interventions included health focused projects such as a physical activity outreach programme in rural localities, support programmes such as a Community Health Information Project which trained members of the local community to act as ambassadors for HLCs, and services such as 'Bumps to babies' which provided midwifery and health visiting services for young families. Although some HLCs still exist, a lack of clarity with regards to funding means the future of many HLCs is unclear.

National Healthy School Standard (NHSS)⁴³

The National Healthy School Standard is led by a partnership between the Department of Health, the Department for Education and Skills and the Health Development Agency. It has three key objectives: to raise pupil achievement; to promote social inclusion; and to contribute to reducing health inequalities.

Box 4: Quality of the evidence

Many of the qualitative studies lacked clear and well focused objectives and the methodologies were often poorly reported, with sparse data on numbers of participants, a non-comprehensive sampling strategy and a lack of information on the process of gathering and analysing data. In addition, few original data were included to support the authors' interpretations. Consequently, in a number of instances it was difficult to assess whether the conclusions were fully justified. Perhaps most significantly though, the vast majority of the studies examined the views of those involved in partnership working (e.g. public health managers or commissioners, who may have had an interest in providing a positive assessment of the intervention), rather than those potentially affected by them (i.e. the local population).

Similarly, the quantitative studies reviewed were subject to a number of limitations relating to methodological approach. Given the type of interventions under review and the intended effects on public health outcomes, the follow-up period was relatively short (<2 years in all cases). In one instance the findings were compromised by the use of an inappropriate control as well as a low follow-up rate.⁴² Possible contamination between intervention and control groups was a cause for concern in two other studies.^{39,40} Finally, there were no studies of the cost-effectiveness of partnerships, which is a notable lacuna given the high costs of partnership working (e.g. HAZs cost £320 million³⁰).

Table 1: Summary of studies of HAZ interventions

Study	Methods	Critical Appraisal*	Key findings
(a) National HAZ interventions			
Bauld et al., 2005 ³³	Quantitative: Secondary analysis of routinely collected data from the Compendium of Clinical and Health Indicators (comparing intervention and comparison areas longitudinally).	2,3,10	Improvement in all cause mortality and CHD mortality in HAZ areas (e.g. in 15-64 age group CHD mortality decreased by 22% in second wave HAZs compared with 18.3% in deprived non-HAZ LAs). Findings not consistent, however, as mortality from accidental falls increased by 31.3% in first wave HAZs compared with 17.1% in comparator areas, despite a focus on accident prevention in some of these areas. Overall no evidence that HAZs made greater improvements to population health than non-HAZ areas between 1997 and 2001.
Bauld et al., 2005 ³⁴	Qualitative: (1) face-to-face and follow-up telephone interviews with all 26 HAZ directors/coordinators; analysis of national HAZ documents; (2) Face-to-face interviews/focus groups with 'key stakeholders', (3) Local documentary analysis in 8 case study areas.	1	Interviewees felt that HAZs' activities had made health inequalities more visible on the local agenda.
Benzeval, 2003 ²⁸	Qualitative: (1) initial mapping of HAZ strategies (document analysis and questionnaire survey of all HAZs); (2) 57 interviews with key stakeholders and HAZ managers in three case studies (Sheffield, North Staffordshire, East London).	1,3	The impact of HAZs on health inequalities was felt by interviewees to be minimal. Some reported that local projects embedded within HAZ had been positive, "changing some individuals' lives". Higher profile of health inequalities on local policy agenda and increased understanding of the wider determinants of health.
Mackenzie et al., 2003 ³²	Qualitative: Case study of eight HAZs (Camden & Islington, Leeds, Luton, Merseyside, North Cumbria, Nottingham, South Yorkshire Coalfields, Walsall). (1) Semi-structured interviews with a range of stakeholders, (2) Review of local and national documents. Focus on CHD and children and young people.	1	Partnership working led to the mainstreaming of some HAZ activities (e.g. CHD cookery clubs, exercise on prescription, smoking cessation services) but not others. Impact on health inequalities uncertain.
Sullivan et al., 2004 ²⁹	Qualitative: Case studies of eight HAZs (1) Analysis of 'Core' HAZ documentation (2) HAZ managers interviewed, as were some key partners and local evaluators, (3) Non-participatory observation of HAZ meetings.	1	Respondents felt that HAZ had positively contributed to the success of other health improvement projects. A pulmonary rehabilitation scheme in one HAZ was cited as an example (no details supplied).

(b) Local/specific HAZ interventions

Burton & Diaz de Leon, 2002 ³⁵	Qualitative: Case study of benefits advice intervention in GP surgeries (1) document analysis (2) interviews with project stakeholders and some clients (June/July 2001).	1,8	Benefit advice services resulted in an increase in client incomes. Clients reported feeling less stress and anxiety and increased feelings of wellbeing as a result of the services. Some of the elderly people interviewed identified 'being able to buy a wheelchair', 'keeping the heating on in winter' and 'eating more healthy food' as a result of receiving Attendance Allowance.
Cole, 2003 ³¹	Qualitative: Semi-structured interviews with 72 key participants about 36 different HAZ interventions (Plymouth, Sept 2002 - Feb 2003).	1,2,3,4,8	Respondents felt that 28/36 projects had achieved success in meeting their objectives, some of which were positive in terms of health inequalities. Only 10 of these projects were mainstreamed after the HAZ funding expired.
Kane, 2002 ³⁶	Qualitative (sparse methodological detail): Case study combining (1) Client video diaries; (2) qualitative reports by project manager.	10	Perceived improved client outcomes compared to medical rehabilitation alone. Knock-on effects were reported in terms of employability of participants. Participation in the project encouraged individuals into education or training and two found employment.

* Numbers in this column signify the quality criteria outlined in Box 1 that the studies were deemed to have met.

Table 2: Summary of studies of Health Improvement Partnerships (HImP) and New Deal for Community (NDC) interventions

Study	Methods	Critical Appraisal*	Key findings
Health Improvement Partnerships			
Benzeval and Meth (2002) ³⁸	Qualitative: (1) Review of all HImP documents, (2) Telephone interviews with key players in the eight NHS Executive regional offices, (3) Case studies of five places (interviews with 64 key informants in total).	1,2,3,4,5,6,7,8	Respondents felt that health inequalities had been moved onto the agenda but there was a need for a coherent strategic framework addressing inequalities to be built into local policy.
Powell et al., 2001 ³⁷	Qualitative: Three case-studies rural, urban and 'mixed urban/sub-urban' were selected. (1) Documentary analysis and observation at policy meetings (2) interviews with a wide range of stakeholders (43 individuals across 3 case-studies).	2,3,5,6,7	Lack of clarity about how the partnership could contribute to public health outcomes
New Deal for Communities			
CRESR, 2005 ³⁹	Mixed: (1) Longitudinal household surveys comparing NDC areas and equivalently deprived non NDC comparison areas (2002 and 2004), clients survey (n=1000) and business survey (n=2000); (2) secondary data analysis in relation to educational attainment per pupil, police recorded crime, and exits/entrances from benefits; (3) Analysis of 39 Partnership level reports for the three years: 2002/03, 2003/04 and 2004/05; (4) 78 focus groups, two in each NDC area, one with participants drawn from the general population and one from a more targeted group such as beneficiaries of particular projects.	Quant: 1,2,3,6,7,8,10 Qual: 1,3,4,5,10	Small improvements in some lifestyle indicators: e.g. smoking fell by 2% to 38% in intervention and comparison areas. Morbidity rates improved slightly (2001-2003 compared to 1999-2001) from 1.93 to 1.77, similar to comparison areas. No evidence that NDC areas were improving their relative position with regard to mortality rates or hospital admissions. Focus group findings revealed that users were positive about efforts to improve health service provision in their area. Indeed, participants from eight focus groups specifically said they had noticed an improvement in local health services during the previous three years.
Stafford, et al., 2008 ⁴⁰	Quantitative: Longitudinal survey of residents in New Deal for Communities (NDC) areas and residents in comparator areas. Final sample size intervention n=10390; comparison n=977.	1,2,3,4,7,10	No consistent differences between NDC and comparator areas in the pattern of health-related outcomes for different demographic groups. Increases were noted in both NDC and comparator areas indicating no evidence for an NDC effect.

* Numbers in this column signify the quality criteria outlined in Box 1 that the studies were deemed to have met.

Table 3: Summary of studies of other intervention types

Study	Methods	Critical Appraisal	Key findings
Health Education Authority Integrated Purchasing Programme (HIPP)			
Evans & Killoran, 2000 ⁴¹	Qualitative: (1) Semi-structured interviews with local stakeholders; (2) participant observation of project meetings, (3) documentary analysis.	1,5,10	Respondents reported that health inequalities moved higher up local agendas.
Healthy Living Centres (HLC)			
Hills et al., 2007 ⁴²	Mixed: (1) Longitudinal study of the characteristics, health and health-related lifestyle and attitudes of a sample of people who attended Healthy Living Centres (HLCs). It consists of a baseline survey followed by two follow-up surveys carried out six months and eighteen months after the baseline. Final sample size n=1,400. Non-regular HLC users comprise the control. (2) Focus groups with local centre employees, documentary analysis, interviews with managers.	Quant: 1,2,7,8,10 Qual: 1,2,3,4,6,7,8	Regular HLC attendance is associated with beneficial outcomes relating to smoking (0.47 [0.28-0.78] p<0.01) physical activity (1.34 [1.03-1.74] p<0.05) and fruit/vegetable consumption (5 daily portions, 1.58 [1.20-2.08] p<0.001). NS difference in alcohol consumption (Frequent drinker 0.84 [0.58-1.22] p.158 and pp.163-164. Deterioration in physical and mental health experienced by non-regular users of HLCs not found among regular users (physical health 1.24, [0.27-2.22] p<0.05; mental health 2.12, [0.941-3.30] p<0.001). Statistically significant difference (p<0.001) between regular and non-regular users for all variables: physical health; mental well-being; self-esteem; contact with people; skills; feeling part of the community; hope for the future Respondents viewed Centres as successful in engaging some of the most deprived sections of their local community, including those with the poorest levels of health; and that HLCs had an important protective effect.
National Healthy School Standard			
TCRU & NFER, 2004 ⁴³	Qualitative: (1) interviews with pupils, school staff, parents/governors, and health professionals in 20 intervention schools, (2) telephone interviews with 11 comparison schools (3) Observational visits to 9 local partnerships and telephone interviews with 21 others. (4) Interviews with each regional coordinator as well as 12 national stakeholders.	1,4,5,6,7,8	Introduced specific health-related initiatives (such as drinking water, addressing mental health and emotional well-being issues, healthy eating and food); raised awareness among local professionals of links between health and educational attainment; led to named health governors in schools; and helped develop and implement a validation and accreditation process for healthy schools.

* Numbers in this column signify the quality criteria outlined in Box 1 that the studies were deemed to have met.

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Web Appendix 1: Partnerships Search strategy and results (January 1997 to June 2008)

Electronic databases

COPAC (Consortium of University Research Libraries Online Catalogue); ASSIA (Applied Social Sciences Index); Social Sciences Citation Index; IBSS (International Bibliography of the Social Sciences); ABI (Abstracted Business Information); Inform; CareData (of the Social Care Institute for Excellence); Cinahl (Cumulative Index to Nursing and Allied Health); Embase; Medline; HMIC (Health Management Information Consortium); Sociological Abstracts; Social Services Abstracts; SIGLE (Grey literature database); CINAHL; Helmis; Kings Fund; IDOX.

Websites

IDeA; SDO; Department of Health; Communities and local government (ODPM); Health Care Commission; NHS; Social Care Institute; NICE; Local Government Association; Kings Fund; Nuffield; Audit Commission; NHS networks; Big Lottery Fund; HSJ; LGC; The Dept for children, schools and families; NHS Confederation; UKPHA; Info4local.gov.uk; Care Services Improvement Partnership; Health Observatories; National Audit Office; Commission for Social Care Inspection; Ofsted; Department for Work & Pensions; Research into Practice; Research into Practice for Adults; Health Services Management Centre in Birmingham; International Journal of Integrated Care; Big Lottery; JRF.

Search Strategies

Assia

(local strategic partnership* or LSP or health action zone* or haz or healthy living centre* or health wellbeing partnership or regeneration partnership or neighbourhood renewal partnership or health improvement partnership or himp or housing health partnership or health care partnership or health social care partnership or wellbeing care partnership or public health partnership or section 31 agreement* or section 31 or health partnership) and (public health or health inequalit* or health improve* or wellbeing or well being or well-being)

Results – 25 references

*** = truncation**

CareData

This database does not recognise combined search terms. Individual terms (i.e.named partnerships) were searched.

Results – 173 references

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- 1 local strategic partnership\$.mp.
- 2 lsp.mp.
- 3 health action zone\$.mp.
- 4 health action zone.mp.
- 5 haz.mp.
- 6 healthy living centre\$.mp.
- 7 healthy living centre.mp.
- 8 health wellbeing partnership.mp.
- 9 health wellbeing.mp.
- 10 regeneration partnership\$.mp.
- 11 regeneration partnership.mp.
- 12 neighbourhood renewal partnership\$.mp. [mp=title, subject heading word, abstract, instrumentation]
- 13 neighbourhood renewal partnership.mp. [mp=title, subject heading word, abstract, instrumentation]
- 14 health improvement partnership\$.mp.
- 15 health improvement partnership.mp.
- 16 himp.mp.
- 17 housing health partnership\$.mp.
- 18 health partnership\$.mp.
- 19 exp HOUSING/
- 20 18 and 19
- 21 care partnership\$.mp.

- 22 health.mp. and 21 [mp=title, subject heading word, abstract, instrumentation]
- 23 wellbeing.mp.
- 24 23 and 21
- 25 public health partnership\$.mp.
- 26 section 31 agreement\$.mp.
- 27 section 31.mp.
- 28 health partnership\$.mp.
- 29 1 or 2 or 3 or 4 or 5 or 6 or 7 or 9 or 10 or 14 or 16 or 25 or 27 or 28
- 30 exp Public Health/
- 31 health inequality.mp.
- 32 health inequalities.mp.
- 33 health improve\$.mp.
- 34 wellbeing.mp.
- 35 well being.mp.
- 36 well-being.mp.
- 37 30 or 31 or 32 or 33 or 34 or 35 or 36
- 38 29 and 37

Results – 79 references

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Embase

- 1 local strategic partnership\$.mp.
- 2 lsp.mp.
- 3 health action zone\$.mp.
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- 9 health wellbeing partnership\$.mp.
- 10 health wellbeing.mp.
- 11 regeneration partnership\$.mp.
- 12 regeneration partnership.mp.
- 13 neighbourhood renewal partnership\$.mp.
- 14 neighbourhood renewal partnership.mp.
- 15 health improvement partnership\$.mp.
- 16 health improvement partnership.mp.
- 17 himp.mp.
- 18 housing health partnership\$.mp.
- 19 health partnership\$.mp.
- 20 exp HOUSING/
- 21 19 and 20
- 22 care partnership\$.mp.
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- 24 exp WELLBEING/
- 25 24 and 22
- 26 public health partnership\$.mp.
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- 28 health partnership\$.mp.
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- 30 exp Public Health/
- 31 health inequalit\$.mp.
- 32 health improve\$.mp.
- 33 exp WELLBEING/
- 34 well being.mp.
- 35 well-being.mp.
- 36 30 or 31 or 32 or 33 or 34 or 35

Results – 80 references

\$ = truncation

Health Services Management Centre

Health and Social Care Partnership Programme: publications

<http://www.hsmc.bham.ac.uk/programmes/Publications.htm>

Results – 88 references

Health Services Management Centre: current publications

<http://www.hsmc.bham.ac.uk/publications/Current.htm>

Results – 1 reference

International Bibliography of the Social Sciences

- 1 local strategic partnership\$.mp. [mp=abstract, title, subject heading, geographic heading]
- 2 lsp.mp. [mp=abstract, title, subject heading, geographic heading]
- 3 health action zone\$.mp. [mp=abstract, title, subject heading, geographic heading]
- 4 haz.mp. [mp=abstract, title, subject heading, geographic heading]
- 5 healthy living centre\$.mp. [mp=abstract, title, subject heading, geographic heading]
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 - 16 health partnership\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 17 housing.mp. [mp=abstract, title, subject heading, geographic heading]
 - 18 16 and 17
 - 19 care partnership\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 20 health.mp. and 19 [mp=abstract, title, subject heading, geographic heading]
 - 21 wellbeing.mp. [mp=abstract, title, subject heading, geographic heading]
 - 22 21 and 19
 - 23 public health partnership\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 24 section 31 agreement\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 25 section 31.mp. [mp=abstract, title, subject heading, geographic heading]
 - 26 health partnership\$.mp. [mp=abstract, title, subject heading, geographic heading]
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 - 29 health inequal\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 30 health improve\$.mp. [mp=abstract, title, subject heading, geographic heading]
 - 31 wellbeing.mp. [mp=abstract, title, subject heading, geographic heading]
 - 32 well being.mp. [mp=abstract, title, subject heading, geographic heading]
 - 33 well-being.mp. [mp=abstract, title, subject heading, geographic heading]
 - 34 28 or 29 or 30 or 31 or 32 or 33
 - 35 27 and 34

Results - 21 references

\$ = truncation

Kings Fund

- 1 local ADJ strategic ADJ partnership\$
- 2 LOCAL-STRATEGIC-PARTNERSHIPS#.DE.
- 3 lsp
- 4 health ADJ action ADJ zone\$
- 5 HEALTH-ACTION-ZONES#.DE.
- 6 healthy ADJ living ADJ centre\$
- 7 HEALTHY-LIVING-CENTRES#.DE.
- 8 health ADJ wellbeing ADJ partnershp\$
- 9 health ADJ wellbeing ADJ partnership
- 10 health ADJ wellbeing
- 11 regeneration ADJ partnership\$
- 12 neighbourhood ADJ renewal ADJ partnership\$
- 13 health ADJ improvement ADJ partnership\$
- 14 himp
- 15 HEALTH-IMPROVEMENT-PROGRAMMES#.DE.
- 16 housing ADJ health ADJ partnership\$
- 17 health ADJ partnership
- 18 housing
- 19 HOUSING#.W..DE.
- 20 17 AND 19
- 21 care ADJ partnership\$
- 22 health AND 21
- 23 wellbeing
- 24 23 AND 21
- 25 public ADJ health ADJ partnership
- 26 section ADJ '31'
- 27 health ADJ partnership\$
- 28 PARTNERSHIPS#.W..DE.
- 29 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 10 OR 11 OR 13 OR 14 OR 15 OR 16 OR 17 OR 20
OR 21 OR 22 OR 25 OR 26 OR 27 OR 28

- 30 public ADJ health
- 31 PUBLIC-HEALTH#.DE.
- 32 health ADJ inequalit\$
- 33 HEALTH-INEQUALITIES#.DE.
- 34 health ADJ improve\$
- 35 HEALTH-IMPROVEMENT#.DE.
- 36 Wellbeing
- 37 well ADJ being
- 38 well-being
- 39 30 OR 31 OR 32 OR 33 OR 34 OR 35 OR 36 OR 37
- 40 29 AND 39

Results – 300 references

\$ = truncation

Medline

- 1 local strategic partnership\$.mp.
- 2 lsp.mp.
- 3 health action zone\$.mp.
- 4 haz.mp.
- 5 healthy living centre\$.mp.
- 6 health wellbeing partnership\$.mp.
- 7 regeneration partnership\$.mp.
- 8 neighbourhood renewal partnership\$.mp.
- 9 health improvement partnership\$.mp.
- 10 himp.mp.
- 11 health partnership\$.mp.
- 12 exp Housing/
- 13 11 and 12

- 14 care partnership\$.mp.
- 15 health.mp. and 14 [mp=title, original title, abstract, name of substance word, subject heading word]
- 16 social care partnership\$.mp.
- 17 health.mp. and 16 [mp=title, original title, abstract, name of substance word, subject heading word]
- 18 wellbeing.mp.
- 19 18 and 14
- 20 public health partnership\$.mp.
- 21 section 31 agreement\$.mp.
- 22 section 31.mp.
- 23 health partnership\$.mp.
- 24 1 or 2 or 3 or 4 or 5 or 10 or 13 or 15 or 17 or 20 or 21 or 22 or 23
- 25 exp Public Health/
- 26 health inequality.mp.
- 27 health inequalities.mp.
- 28 health improve\$.mp.
- 29 wellbeing.mp.
- 30 well being.mp.
- 31 well-being.mp.
- 32 25 or 26 or 27 or 28 or 29 or 30 or 31
- 33 24 and 32

Results – 286 references

\$ = truncation

Social Services Abstracts

(local strategic partnership* or lsp or health action zone* or healthy living centre* or health wellbeing partnership* or wellbeing partnership* or regeneration partnership* or neighbourhood renewal

partnership* or health improvement partnership* or housing health partnership* or health partnership* or health care partnership* or care partnership* or wellbeing care partnership* or care partnership* or public health partnership* or section 31 agreement* or section 31 or health partnership*) and (public health or health inequalit* or health improve* or wellbeing or well being or well-being)

Results – 49 references

* = truncation

Sociological Abstracts

(local strategic partnership* or lsp or health action zone* or haz or healthy living centre* or health wellbeing partnership* or regeneration partnership* or neighbourhood renewal partnership* or health improvement partnership* or himp or housing health partnership* or health partnership* or health care partnership* or care partnership* or health social care partnership* or social care partnership* or public health partnership* or section 31 agreements or section 31 or health partnership*) and (public health or health inequalit* or health improve* or wellbeing or well being or well-being)

Results - 29 references

* = truncation

Social Sciences Citation Index

TI=(local strategic partnership* or lsp or health action zone* or haz or healthy living centre* or health wellbeing partnership* or regeneration partnership* or neighbourhood renewal partnership* or health improvement partnership* or himp or housing health partnership* or health care partnership* or health social care partnership* or wellbeing care partnership* or public health partnership* or section 31 agreement* or section 31 or health partnership*) and TI=(public health or health inequalit* or health improve* or wellbeing or well being or well-being)

Results = 157 references

TI = title search

* = truncation